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SASCMA EMCC & H.H. BBA &
U.J.B. BCA & Msc(IT) & STERS BA
(Psychology) & B.sc. (Data Science)
Affiliated to Veer Narmad South Gujarat University

FYBSC(IT) [SEM-1]

Practical Journal

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Date:

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Codes:-

Q1: Convert miles to kilometers

```
#include<stdio.h>
int main ()
{
float miles,km;
printf("Enter miles:-");
scanf("%f",&miles);
km = miles*1.60934;
printf("%.2f miles=%.2fkm\n",miles,km);
return 0;
 }
```

Output:-

```
bscit-43@bscit-43-H610M-K-DDR4:~/krishna$ gcc q1.c -o q1
bscit-43@bscit-43-H610M-K-DDR4:~/krishna$ ./q1
Enter miles:-52
52.00 miles=83.69km
```

Codes:-

Q2: Compute the sum of even elements in an array

```
#include <stdio.h>

int main() {
    int arr[] = {1, 2, 3, 4, 5, 6};
    int n = sizeof(arr) / sizeof(arr[0]);
    int sum = 0;

    for (int i = 0; i < n; i++) {
        if (arr[i] % 2 == 0) {
            sum += arr[i];
        }
    }

    printf("Sum of even elements: %d\n", sum);

    return 0;
}
```

Output:-

```
bscit-43@bscit-43-H610M-K-DDR4:~/krishna$ gcc q2.c -o q2
bscit-43@bscit-43-H610M-K-DDR4:~/krishna$ ./q2
Sum of even elements: 12
```

Codes:-

Q3: Print the first N natural numbers in reverse

```
#include<stdio.h>
int main()
{
 int n,i;
   printf("Enter a number:-");
   scanf("%d",&n);

  for(i=n;i>=1;i--)
  {
  printf("%d",i);
  }
  printf("\n");
  return 0;
}
```

Output:-

```
bscit-43@bscit-43-H610M-K-DDR4:~/krishna$ gcc q3.c -o q3
bscit-43@bscit-43-H610M-K-DDR4:~/krishna$ ./q3
Enter a number:-5
54321
bscit-43@bscit-43-H610M-K-DDR4:~/krishna$
```

Codes:-

Q4: Reverse a given string

```
#include <stdio.h>
int main()
{
    char str[100];
    int i, length = 0;
    printf("Enter a string: ");
    gets(str); // easy input

    while (str[length] != '\0') {
        length++;
    }

    printf("Reversed string: ");
    for (i = length - 1; i >= 0; i--) {
        printf("%c", str[i]);
    }

    return 0;
}
```

Output:-

```
bscit-43@bscit-43-H610M-K-DDR4:~/krishna$ ./q1
Enter a string: krishna
Reversed string: anhsirkbscit-43@bscit-43-H610M-K-DDR4:~/krishna$
```

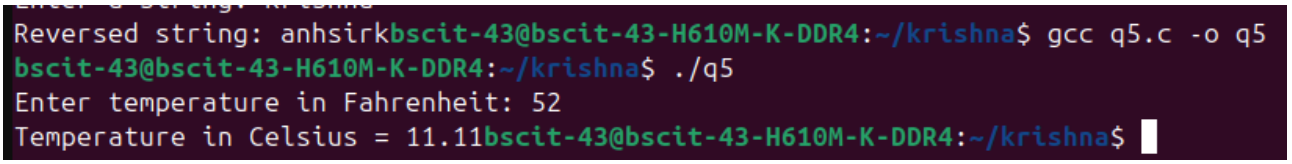
Codes:-

Q5: Convert Fahrenheit to Celsius

```
#include <stdio.h>
int main()
 {
    float f, c;
    printf("Enter temperature in Fahrenheit: ");
    scanf("%f", &f);

  c = (f - 32) * 5 / 9;
    printf("Temperature in Celsius = %.2f", c);
    return 0;
}
```

Output:-



Q6: Subtract two matrices

```
#include <stdio.h>
int main() {
    int a[2][2], b[2][2], sub[2][2], i, j;

    printf("Enter first 2x2 matrix:\n");
    for(i=0;i<2;i++)
        for(j=0;j<2;j++)
            scanf("%d", &a[i][j]);
    printf("Enter second 2x2 matrix:\n");
    for(i=0;i<2;i++)
        for(j=0;j<2;j++)
            scanf("%d", &b[i][j]);
    printf("Subtraction of matrices:\n");
    for(i=0;i<2;i++) {
        for(j=0;j<2;j++) {
            sub[i][j] = a[i][j] - b[i][j];
            printf("%d ", sub[i][j]);
        }
        printf("\n");
    }
    return 0;
}
```

Output:-

```
bscit-43@bscit-43-H610M-K-DDR4:~/krishna$ gcc q6.c -o q6
bscit-43@bscit-43-H610M-K-DDR4:~/krishna$ ./q6
Enter first 2x2 matrix:
2
6
3
5
Enter second 2x2 matrix:
5
9
8
7
Subtraction of matrices:
-3 -3
-5 -2
```

Codes:-

Q7: Reverse words in a string

```
#include <stdio.h>
int main() {
    char str[100];
    int i = 0, length = 0;
    printf("Enter a string: ");
    fgets(str, sizeof(str), stdin);
    while (str[length] != '\0') {
        length++;
    }
    if (str[length - 1] == '\n') {
        str[length - 1] = '\0';
        length--;
    }
    for (i = 0; i < length / 2; i++) {
        char temp = str[i];
        str[i] = str[length - 1 - i];
        str[length - 1 - i] = temp;
    }
    printf("Reversed string: %s\n", str);
    return 0;
}
```

Output:-

```
bscit-43@bscit-43-H610M-K-DDR4:~/krishna$ gcc q7.c -o q7
bscit-43@bscit-43-H610M-K-DDR4:~/krishna$ ./q7
Enter a string: krishna
Reversed string: anhsirk
bscit-43@bscit-43-H610M-K-DDR4:~/krishna$
```

Codes:-

Q8: Compute the product of elements in a 1D array

```
#include <stdio.h>
int main() {
    int a[5], i;
    long product = 1;
    printf("Enter 5 numbers: ");
    for(i=0;i<5;i++)
        scanf("%d", &a[i]);

    for(i=0;i<5;i++)
        product *= a[i];

    printf("Product = %ld", product);
    return 0;
}
```

Output:-.

Codes:-

Q9: Convert a string to lowercase

```
   #include <stdio.h>
#include <ctype.h>
int main() {
    char str[100];
    int i;
    printf("Enter a string: ");
    gets(str);
    for(i=0; str[i]!='\0'; i++)
        str[i] = tolower(str[i]);
    printf("Lowercase string: %s", str);
    return 0;
}
```

Output:-

```
bscit-43@bscit-43-H610M-K-DDR4:~/krishna$ ./q9
Enter a string: krishna
Lowercase string: krishnabscit-43@bscit-43-H610M-K-DDR4:~/krishna$
```

FYB.SC.(IT) (Sem-1)
(programming-c)(Example:practical-10)

Codes:-

Q10: Compute the LCM of two numbers

```
#include <stdio.h>
int main() {
int a, b, max;
printf("Enter two numbers: ");
scanf("%d%d", &a, &b);
max = (a > b) ? a : b;

 while(1) {
    if(max % a == 0 && max % b == 0) {
        printf("LCM = %d", max);
        break;
    }
    max++;
}
return 0;
}
```

Output:-

```
Lowercase string: krishnabscit-43@bscit-43-H610M-K-DDR4:~/krishna$ gcc q10.c -o q10
bscit-43@bscit-43-H610M-K-DDR4:~/krishna$ ./q10
Enter two numbers: 5
2
LCM = 10bscit-43@bscit-43-H610M-K-DDR4:~/krishna$
```

FYB.SC.(IT) (Sem-1)
(programming-c)(Example:practical-11)

Codes:-

Q11: Compute factorial of a number

```
 #include <stdio.h>
int main()
 {
    int n, i;
    long fact = 1;
    printf("Enter a number: ");
    scanf("%d", &n);
    for(i=1; i<=n; i++)
        fact *= i;
    printf("Factorial = %ld", fact);
    return 0;
}
```

Output:-

```
bscit-43@bscit-43-H610M-K-DDR4:~/krishna$ gcc q11.c -o q11
bscit-43@bscit-43-H610M-K-DDR4:~/krishna$ ./q11
Enter a number: 5
Factorial = 120bscit-43@bscit-43-H610M-K-DDR4:~/krishna$
```

Codes:-.

Q12: Find the largest element in a 1D array

```
#include <stdio.h>
int main() {
    int a[5], i, max;
    printf("Enter 5 numbers: ");
    for(i=0;i<5;i++)
        scanf("%d", &a[i]);

    max = a[0];
    for(i=1;i<5;i++)
        if(a[i] > max)
            max = a[i];

    printf("Largest element = %d", max);
    return 0;
}
```

Output:-

```
Factorial = 120bscit-43@bscit-43-H610M-K-DDR4:~/krishna$ gcc q12.c -o q12
bscit-43@bscit-43-H610M-K-DDR4:~/krishna$ ./q12
Enter 5 numbers: 7
5
6
2
6
Largest element = 7bscit-43@bscit-43-H610M-K-DDR4:~/krishna$
```

Codes:-

Q13: Check whether a number is a perfect square

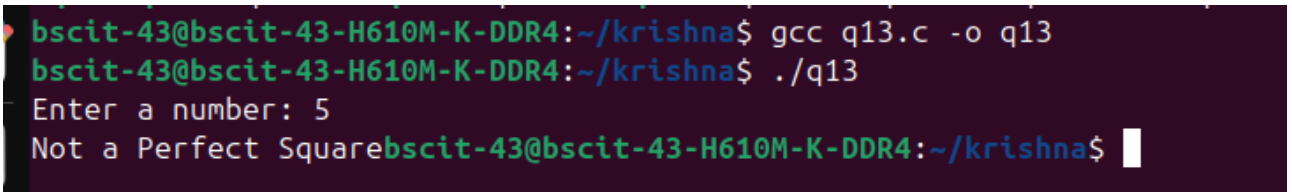
```
#include <stdio.h>
int main() {
    int n, i, flag = 0;
    printf("Enter a number: ");
    scanf("%d", &n);

    for(i = 1; i <= n/2; i++) {
        if(i * i == n) {
            flag = 1;
            break;
        }
    }

    if(flag == 1 || n == 0 || n == 1)
        printf("Perfect Square");
    else

   printf("Not a Perfect Square");
    return 0;
}
```

Output:-



Codes:-

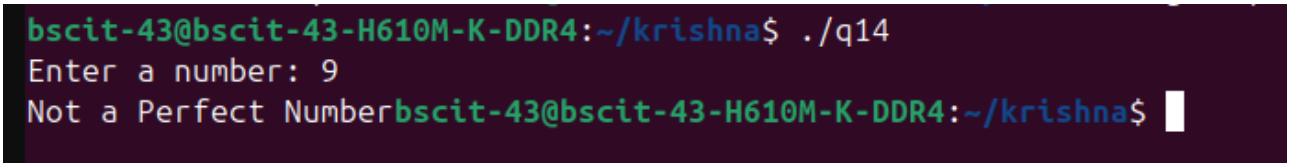
Q14: Check whether a number is perfect

```
#include <stdio.h>
int main() {
    int n, i, sum = 0;
    printf("Enter a number: ");
    scanf("%d", &n);

    for(i=1; i<=n/2; i++)
        if(n % i == 0)
            sum += i;

    if(sum == n)
        printf("Perfect Number");
    else
        printf("Not a Perfect Number");
    return 0;
}
```

Output:-



Codes:-

Q15: Check whether a number is Armstrong

```
#include <stdio.h>
int main() .
{
    int n, temp, rem, digits = 0, i, pow, sum = 0;
    printf("Enter a number: ");
    scanf("%d", &n);
    temp = n;
    while(temp){ digits++; temp /= 10; }
    temp = n;
    while(temp){
        rem = temp % 10;
        pow = 1;
        for(i = 0; i < digits; i++) pow *= rem;
        sum += pow;
        temp /= 10;
    }
    printf(sum == n ? "Armstrong Number" : "Not an Armstrong Number");
    return 0;
}
```

Output:-

```
bscit-43@bscit-43-H610M-K-DDR4:~/krishna$ gcc q15.c -o q15
bscit-43@bscit-43-H610M-K-DDR4:~/krishna$ ./q15
Enter a number: 5
Armstrong Numberbscit-43@bscit-43-H610M-K-DDR4:~/krishna$
```